IN THE CLAIMS:

Please amend the claims to have the status and content indicated in the following listing of claims, wherein any cancellation of claims is made *without prejudice*.

1-46. (cancelled)

47. (Currently amended) An instrument for measuring a Raman signal of tissue, the instrument comprising a laser, a signal detection unit for measuring the Raman signal, and a fiber optic probe, wherein the fiber optic probe comprises one or more optical fibers for directing laser light onto the tissue and for collecting light that is scattered by the tissue and guiding the collected light away from the tissue towards the signal detection unit, the fiber or fibers comprising a core, a cladding and optionally a coating, and the fiber or fibers for collecting light having substantially no Raman signal in one or more parts of the 2500-3700 [[cm-1]] $\underline{cm^{-1}}$ spectral region, and wherein the detection unit records the Raman signal scattered by the tissue in said spectral region, the instrument further comprising a signal analysis unit which analyses the recorded Raman signal in one or more parts of the 2500-3700 [[cm-1]] $\underline{cm^{-1}}$ spectral region, the analysis comprising an algorithm which outputs data regarding the molecular composition of the tissue and/or the clinical diagnostic class to which the tissue belongs.

48. (Previously presented) Instrument according to claim 47, wherein the fiber optic probe comprises an optical fiber that both directs laser light onto the tissue and collects light that is scattered by the tissue and guides the collected light away from the tissue towards the signal detection unit.

49. (Previously presented) Instrument according to claim 47, wherein the fiber optic probe comprises at least one fiber having a low OH- fused silica core.

50. (Previously presented) Instrument according to claim 47, wherein the fiber optic probe comprises at least one optical fiber having a fused silica core and a fused silica or Teflon or TECS cladding.

51. (Currently amended) Instrument according to claim 47, ~~by using~~ comprising a coating material in which intrinsically little or substantially no signal is generated in the 2500-3700 [[cm-1]] cm^{-1} wavenumber interval.

52. (Previously presented) Instrument according to claim 47, wherein the detection unit also comprises a detector for measuring fluorescence and/or a detector for near-infrared absorption.

53. (Previously presented) Instrument according to claim 52 wherein fluorescence and/or near-infrared absorption measurements make use of a fiber also used in obtaining Raman signal and wherein the detection unit also comprises a detector for measuring fluorescence and/or a detector for near-infrared absorption.

54. (Previously presented) Instrument according to claim 47 wherein the fiber optic probe comprises a bundle of fibers for measuring and/or scanning a tissue area.

55. (Previously presented) Instrument according to claim 47, wherein part of the fiber is integrated or combined with a catheter that provides additional information about the tissue or which comprises means to obtain tissue samples, means to treat tissue and/or means used in surgical procedures.

56. (Previously presented) Instrument according to claim 47, wherein the fiber optic probe comprises one single optical fiber.

57. (Currently amended) ~~Method of using of an instrument~~ A method for measuring a Raman signal of ~~tissue, the~~ tissue employing an instrument comprising a laser, a signal detection unit ~~for measuring the Raman signal~~, a signal analysis unit, and a fiber optic probe, wherein the fiber optic probe comprises one or more optical fibers ~~for~~, the method comprising using the fiber optic probe for directing laser light onto the tissue, ~~and~~ collecting light that is scattered by the tissue and guiding the collected light away from the tissue towards the signal detection unit, the fiber or fibers of the fiber optic probe comprising a core, a cladding and optionally a coating, and the fiber or fibers for collecting light having substantially no Raman signal in one or more parts of the 2500-3700 [[cm-1]] cm^{-1} spectral region, ~~and wherein the detection unit records~~ recording the Raman signal scattered by the tissue in said spectral region using the detection unit, ~~the instrument further comprising a~~ using the signal analysis unit ~~which analyses~~ to analyze the recorded Raman signal in one or more parts of the 2500-3700 [[cm-1]] cm^{-1} spectral region, ~~the analysis comprising~~ and using an algorithm ~~which outputs~~ to output data regarding the molecular composition of the tissue and/or the clinical diagnostic class to which the tissue belongs.

58. (Currently amended) Method ~~of using~~ according to claim 57, wherein the tissue is excised, ~~biopted~~ biopsied or taken from a human or animal body before measuring.

59. (Currently amended) Method ~~of using~~ according to claim 57, ~~for~~ comprising measuring a Raman signal of a tissue sample prior to ~~it being resected, or biopted~~ resecting or biopsying the tissue sample or for selecting tissue for biopsy or resection.

60. (Currently amended) A method for producing and measuring a Raman signal of tissue, comprising providing a laser, a signal detection unit for measuring a Raman signal, and a fiber optic probe, wherein the fiber optic probe comprises one or more optical fibers for directing laser light onto the tissue to produce a Raman signal, ~~and~~ for collecting light that is scattered by the tissue and for guiding the collected light away

from the tissue toward the signal detection unit, the fiber or fibers comprising a core, a cladding and optionally a coating, the method comprising sending laser light through the one or more optical fibers, receiving the Raman signal from the tissue through the one or more optical fibers, ~~and~~ detecting the Raman signal by ~~a~~ the signal detection unit, the fiber or fibers used for collecting light having substantially no Raman signal in one or more parts of the 2500-3700 [[cm-1]] cm^{-1} spectral region, and wherein the signal detection unit records the Raman signal in said spectral region, the ~~instrument~~ method further comprising ~~a~~ using the signal analysis unit ~~which analyses~~ to analyze the recorded Raman signal in one or more parts of the 2500-3700 [[cm-1]] cm^{-1} spectral ~~region, the analysis comprising~~ region using an algorithm ~~which outputs~~ and outputting data regarding the molecular composition of the tissue and/or the clinical diagnostic class to which the tissue belongs.

61. (Currently amended) Method for evaluating an optical fiber for measuring a Raman signal of tissue, wherein an instrument according to claim [[1]] 47 is used and wherein a tissue sample is excised, ~~biopted~~ biopsied or taken from a human or animal body before measuring, and wherein the Raman signal of the optical fiber is measured of the sample and of a ~~blanc~~ blank, and wherein the Raman signals of the sample and of the blanc are compared.

62. (Currently amended) Method for evaluating the suitability of a type of fiber for measuring the Raman signal of tissue, comprising:

- using an instrument according to ~~one of claims~~ claim 47
- performing a measurement without tissue being present at the distal end of the fiber,
- performing a measurement with tissue being present at the distal end of the fiber,
- comparing the spectra obtained with and without tissue being present
- concluding that the fiber is suitable for measuring the Raman signal of tissue.